

Listing of Claims

1. (Currently Amended) A transgenic plant comprising a plant transformation vector comprising a nucleotide sequence that encodes ~~or is complementary to a sequence that encodes a~~ HIO102 polypeptide comprising an amino acid sequence having at least 95% sequence identity to the amino acid sequence of SEQ ID NO:2, or an ortholog thereof, wherein the polypeptide confers a high oil phenotype of increased oil content without a significant increase in long chain fatty acid components of seed oil relative to a plant of the same species not comprising the plant transformation vector, whereby the transgenic plant has a high oil phenotype relative to a plant of the same species not comprising the plant transformation vectorecontrol plants.
2. (Original) The transgenic plant of Claim 1, which is selected from the group consisting of rapeseed, soy, corn, sunflower, cotton, cocoa, safflower, oil palm, coconut palm, flax, castor and peanut.
3. (Original) A plant part obtained from the plant according to Claim 1.
4. (Original) The plant part of Claim 3, which is a seed.
5. (Currently Amended) A method of producing oil comprising growing the transgenic plant of Claim 1 and recovering oil from said plant.
6. (Currently Amended) A method of producing a plant with a high oil phenotype in a plant, said method comprising:
 - a) introducing into progenitor cells of the plant a plant transformation vector comprising a nucleotide sequence that encodes ~~or is complementary to a sequence that encodes a~~ HIO102 polypeptide comprising an amino acid sequence having at least 95% sequence identity to the amino acid sequence of SEQ ID NO:2, or an ortholog thereof, wherein the polypeptide confers a high oil phenotype of increased oil content without a significant increase in long chain fatty acid components of seed oil relative to a plant of the same species not comprising the plant transformation vector, and

b) growing the transformed progenitor cells to produce a transgenic plant, wherein said polynucleotide sequence is expressed, and said transgenic plant exhibits an altered oil content phenotype relative to a plant of the same species not comprising the plant transformation vector control plants.

7. (Currently Amended) A plant obtained by ~~a~~the method of Claim 6.

8. (Original) The plant of Claim 7, which is selected from the group consisting of rapeseed, soy, corn, sunflower, cotton, cocoa, safflower, oil palm, coconut palm, flax, castor and peanut.

9.-11. (Canceled)